

Name _____ Chemistry I: Conjugate Acid-Base pairs

Period _____ Date _____

Using Brønsted-Lowry Acid-Base Theory complete the following:

Hints: if a substance loses a proton, one will reduce the charge by one. If a substance gains a proton then the charge will increase by one.

Give the conjugate base of the following acids.

- | | | | |
|-----------------------------------|-------|--|-------|
| 1. HBr | _____ | 2. HNO ₃ | _____ |
| 3. HF | _____ | 4. H ₃ PO ₄ | _____ |
| 5. HSO ₃ ⁻ | _____ | 6. H ₃ O ⁺ | _____ |
| 7. HPO ₄ ⁻² | _____ | 8. HC ₂ H ₃ O ₂ | _____ |
| 9. H ₂ S | _____ | 10. H ₂ CO ₃ | _____ |

Give the conjugate acid of the following bases.

- | | | | |
|--|-------|-----------------------------------|-------|
| 11. HSO ₄ ⁻¹ | _____ | 12. OH ⁻¹ | _____ |
| 13. Cl ⁻¹ | _____ | 14. CO ₃ ⁻² | _____ |
| 15. H ₂ O | _____ | 16. SO ₄ ⁻² | _____ |
| 17. NH ₃ | _____ | 18. NO ₂ ⁻¹ | _____ |
| 19. H ₂ PO ₃ ⁻¹ | _____ | 20. SO ₃ ⁻² | _____ |